

STATE OF VERMONT  
PUBLIC SERVICE BOARD

Docket No. 7500

Petition of New England Power Company, d/b/a	)	Technical Hearing
National Grid, for a Certificate of Public Good	)	held at Montpelier, Vermont
pursuant to 30 V.S.A. Section 248, for the so-	)	June 10, 2010
called G-33 Transmission Line Refurbishment	)	
Project, involving 20.3 miles, in the Towns of	)	
Rockingham, Westminster, Putney, Dummerston	)	
and Brattleboro, Vermont	)	

Order entered: 8/3/2010

HEARING OFFICER: Mary Jo Krolewski, Utilities Analyst

APPEARANCES: Jeanne Elias, Esq.  
for Vermont Department of Public Service

Nancy Malmquist, Esq.  
Downs Rachlin Matrin PLLC  
for New England Power Company, d/b/a National Grid

Catherine Gjessing, Esq.  
for Vermont Agency of Natural Resources

Jeanne Burns, Esq.  
for Central Vermont Public Service Corporation

**I. INTRODUCTION**

This case involves a petition filed by New England Power Company, d/b/a National Grid, ("NEP") on March 16, 2009. The petition requests a certificate of public good ("CPG") under 30 V.S.A. § 248 authorizing the reconstruction of 20.3 miles of 69 kV G-33 transmission line in the towns of Rockingham, Westminster, Putney, Dummerston and Brattleboro, Vermont.

In this Proposal for Decision, I recommend that the Vermont Public Service Board ("Board") approve the proposed project and issue a CPG to NEP authorizing construction of the proposed project.

## **II. PROCEDURAL HISTORY**

On March 16, 2009, NEP filed a petition for a CPG, pursuant to 30 V.S.A. § 248, requesting approval to reconstruct 20.3 miles of 69 kV G-33 transmission line in the towns of Rockingham, Westminster, Putney, Dummerston and Brattleboro, Vermont.

On April 21, 2009, I held a prehearing conference at the Board's hearing room in Montpelier, Vermont.

On June 10, 2009, NEP filed supplemental information on the proposed project.

On June 11, 2009, a site visit was held at sites along the proposed project area and a public hearing was held at the Bellows Falls Waypoint Center in Bellows Falls, Vermont. Ten members of the public, including a representative of the Windham Regional Commission, provided comment at the public hearing. Members of the public raised questions and concerns with regard to construction plans and schedule, right-of-way clearing, and impacts with regard to wetlands, water quality, soil erosion, and threatened and endangered species.

In a June 19, 2009, memorandum, Board staff requested additional information regarding NEP's petition.

On July 10, 2009, in an Order on Motion to Intervene, I denied permissive intervention to Mr. Anton and Mr. Hendricks.

On July 17, 2009, NEP filed additional information in response to the Board's June 19 request.

On July 22, 2009, a second public hearing was held at the Bellows Falls Waypoint Center in Bellows Falls, Vermont.<sup>1</sup> One member of the public, Mr. Hendricks, provided comments at the public hearing with regard to the environmental impacts of the proposed project.

On July 31, 2009, Central Vermont Service Corporation ("CVPS") filed prefiled testimony. On August 7, 2009, the Vermont Department of Public Service ("Department") filed prefiled testimony.

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1. Section 248(a)(4)(D) requires "[n]otice of the public hearing shall be published in a newspaper of general circulation in the county or counties in which the proposed facility will be located two weeks successively, the last publication to be at least 12 days before the day appointed for the hearing." For the June 11 public hearing, the newspaper failed to publish the notice on the dates requested by the Board. As a result, the statutory notice of the required public hearing was not provided, and the Board conducted a second public hearing to meet the statutory requirement.

On August 7, 2009, Mr. Hendricks filed a motion with the Board to reconsider the July 10 Order denying him intervention.

On August 14, 2009, NEP filed supplemental information in response to written comments of the Windham Regional Commission.

On September 2, 2009, the Board issued an order affirming my decision to deny Mr. Hendricks' motion to intervene.

On February 10, 2010, and February 11, 2010, CVPS and NEP, respectively, filed status reports requesting additional time in the schedule for settlement.

On March 12, 2010, NEP filed a status report stating that parties had reached a consensus and resolved outstanding issues. On April 20, 2010, I held a status conference by telephone to establish a schedule for the remainder of the proceeding.

On April 29, 2010, NEP filed supplemental information and party agreements that were developed during settlement discussions.

In a May 24, 2010, memorandum, I identified five questions regarding the petition and requested that NEP be prepared to answer them at the technical hearing. On June 9, 2010, NEP filed supplemental information in response to the questions.

A technical hearing was held on June 10, 2010, in the Board's hearing room in Montpelier, Vermont. At the hearing, the prefiled testimony and exhibits of NEP, the Department, CVPS, and the Vermont Agency of Natural Resources ("ANR"), were entered into evidence.

On July 1, 2010, NEP, the Department, ANR, and CVPS filed a consensus proposal for decision. I am admitting the consensus proposal for decision into evidence in this proceeding as exhibit Joint-1.<sup>2</sup> On July 22, 2010, the Department filed a letter waiving its rights under 3 V.S.A. § 811 to review and comment upon a proposal for decision. On July 23, 2010, ANR and CVPS filed letters waiving their rights under 3 V.S.A. § 811 to review and comment upon a proposal for decision.

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2. Any party wishing to object to the admission of the consensus proposal for decision into evidence should do so in a motion for reconsideration of this decision and order.

### **III. FINDINGS**

Based on the substantial evidence of record and the testimony presented at the hearing, I hereby report the following findings to the Board in accordance with 30 V.S.A. § 8.

#### **Background and Project Description**

1. NEP is a subsidiary of National Grid USA, a Delaware Corporation, which is a subsidiary of National Grid plc. NEP is a Massachusetts corporation engaging primarily in the business of wholesale transmission of electricity and is qualified to transact business in Vermont as a foreign corporation. Petition at 1.
2. The proposed project will refurbish 20.3 miles of existing 69 kV G-33 transmission line in the towns of Rockingham, Westminster, Putney, Dummerston, and Brattleboro, Vermont. Ryder pf. at 3-4.
3. The existing G-33 line is a 69 kV wood-pole transmission line constructed in the early 1900's. The G-33 line runs from the Village of Bellows Falls to Brattleboro, crosses the Connecticut River to Chesterfield, New Hampshire, and then runs from Chesterfield to Hinsdale, New Hampshire; and it then crosses the Vernon dam and terminates at the Vernon hydro-electric station in Vernon, Vermont. Ryder pf. at 2-3; exhs. SHR-4, SHR-5, and SHR-6.
4. The total length of the G-33 transmission line is approximately 29.5 miles, consisting of approximately 20.0 miles in Vermont that run mostly parallel to I-91 from Bellows Falls to Brattleboro, approximately 9.2 miles along the east side of the Connecticut River in Chesterfield and Hinsdale, New Hampshire, and a 0.3 mile segment of a G-33 tap line from Hinsdale to the CVPS South Brattleboro substation. Ryder pf. at 3.
5. The G-33 line supplies two load-serving substations in the towns of Westminster and Putney and provides primary or alternate electricity supply to five load-serving substations in the town of Brattleboro. Ryder pf. at 4-5.
6. The proposed project will improve reliability by replacing transmission line components that are nearing the ends of their useful service lives and centering poles in the right-of-way to reduce exposure to tree-caused outages. Ryder pf. at 5.

7. The G-33 transmission line is located on a private right-of-way that is typically 100 feet wide. The proposed project will include the replacement and relocation of transmission poles along approximately 10.7 of the 20.3 miles in Vermont from their present position along the nearby western tree-line boundary towards the center of the right-of-way. The poles along the remaining 9.6 miles of the route in Vermont, located in the center of the right-of-way, will be replaced in approximately the same location. Ryder pf. at 3-5.

8. The proposed project will include the replacement of approximately 375 wood-pole transmission structures, the addition of five new pole structures, the removal of five existing pole structures, and the replacement of the existing copper conductors with non-specular 477 kcmil aluminum conductor, steel-reinforced conductors. Ryder pf. at 4; Busher pf. at 3-4; exhs. SHR-2, NEP- 2, and NEP-1.

9. The typical structure configuration for the proposed project will be a single-pole wood structure with double, 7-foot, wood cross-arms, and porcelain line post insulators. The resulting conductor configuration will be triangular, with conductors spaced 6 feet apart at their attachments to the structure. This type of structure will be used at approximately 80 percent of new or replacement structure locations and is similar to the majority of the single-pole wood structures currently in place. Ryder pf. at 5; exhs. SHR-3 at Sheet 1, MJB-3, NEP-1, and NEP-2.

10. Approximately 15 percent of the new or replacement structures for the proposed project will be guyed, two-pole wood H-frames with steel cross arms. In some locations, self-supporting, weathering-steel, H-frame structures will be used. The resulting conductor configuration will be horizontal with conductors spaced 8.5 feet apart at their attachments to the structure. This type of structure will be used for long spans or at small to moderate angles in the line. Ryder pf. at 6; exhs. NEP-1, NEP-2, and SHR-3 at Sheet 2.

11. Approximately 4 percent of the new or replacement structures for the proposed project will be guyed one-, two-, or three-pole wood pull-off structures, which will be used at large angles in the line. Ryder pf. at 6; exhs. SHR-3 at Sheet 3, NEP-1, and NEP-2.

12. The remaining approximately one percent of the new or replacement structures would be two-pole switch structures (similar to the H-frames structures described in Finding 10 above, but

designed to support line switching devices) and one- or two-pole, tap structures used at the taps to the various substations. Ryder pf. at 6; exhs. NEP-1 and NEP-2.

13. The proposed project will include the replacement of the 50-year-old circuit breaker at the Ferry Road Substation due to age and condition. The replacement will include disconnect switches and a transmission line termination structure. Exh. NEP-1.

14. The proposed project will include: (1) at the request of CVPS, the installation of a manually-operated airbreak switch on the Ferry Road side of the G-33 line on steel pole structure 410 (the tap to the FiberMark substation); and (2) the installation of two remotely controlled, load-break switches supported by the Brudies Road tap structure. Exh. NEP-1.

15. The proposed project will include the installation of improved lightning protection features at targeted locations. The improved lightning protection will involve single or double 3/8-inch-diameter, extra-high-strength, steel shield wires above the conductors in the two long and exposed Connecticut River crossings. Shield wires have been determined not to be necessary along the vast majority of the right-of-way because the adjoining tree line offers lightning protection since the trees are considerably higher than the G-33 conductors. Ryder pf. at 4 and 6-7.

### **Orderly Development of the Region**

[30 V.S.A. § 248(b)(1)]

16. The proposed project will not unduly interfere with the orderly development of the region, with due consideration having been given to the recommendations of the municipal and regional planning commissions, the recommendations of municipal legislative bodies, and the land conservation measures contained in the plan of any affected municipality. This finding is supported by findings 17 through 23, below.

17. NEP provided plans for the proposed project to the Windham Regional Commission, the Rockingham, Westminster, Putney, Dummerston and Brattleboro Planning Commissions, the Bellows Falls Village Corporation, and the Rockingham, Westminster, Putney, Dummerston and Brattleboro Selectboards on August 22, 2008. Ryder pf. at 9.

18. The proposed project will be consistent with the land use and scenic resource provisions of the Rockingham Town Plan. The proposed project minimizes visual impacts by rebuilding in an existing transmission right-of-way and does not involve the expansion of the line. The proposed project is not located near Rockingham's designated scenic resources. The rebuilding of the G-33 line for reliability purposes is consistent with the Plan's acknowledgment that energy is a vital resource that "helps to ensure a viable future for residents." Ryder pf. at 10-11; Buscher pf. at 6; exhs. SHR-7 at 36 and MJB-3.

19. The proposed project will be consistent with the Westminster Town Plan's scenic resource, land-use, and energy policies because it will make use of the existing transmission corridor and will not change the "special scenic attractiveness" of the area. The proposed project accords with the Plan's recognition that "Westminster is, and most likely will continue to be, dependent on energy sources generated or imported from outside its borders." Ryder pf. at 12; exh. SHR-8 at 26.

20. The proposed project will be consistent with the Putney Town Plan's provisions on energy and natural and scenic resources because it makes use of the existing transmission corridor for a needed transmission project. Ryder pf. at 13; exh. SHR-9.

21. The proposed project will be consistent with the relevant provisions of the Dummerston Town Plan because the transmission line will be rebuilt, and will remain located, within the existing right-of-way. Ryder pf. at 14-15; exh. SHR-10.

22. The proposed project will be consistent with the Brattleboro Town Plan's provisions on land conservation, scenic resources, and energy because the project will rebuild an existing transmission line within the existing right-of-way. The Plan's provisions on energy note that "energy is an integral part of our industrial and environmental future" and that some transmission lines may need to be upgraded to enhance system reliability. Ryder pf. at 15; exh. SHR-11.

23. The proposed project will be consistent with the relevant provisions of the Windham Regional Plan because the project will accomplish a needed transmission reliability project by rebuilding an existing transmission line while utilizing the existing transmission corridor. Ryder pf. at 17-18; exh. SHR-12.

**Need for Present and Future Demand for Service**

[30 V.S.A. § 248(b)(2)]

24. The proposed project is not driven by new electrical demand, rather it is driven by the need to replace transmission line components nearing the ends of their useful lives, as well as by the desire to improve electric reliability by reducing exposure to tree-caused outages. Therefore, the need for the proposed project cannot otherwise be addressed through energy conservation or load control measures. Ryder pf. at 20.

**System Stability and Reliability**

[30 V.S.A. § 248(b)(3)]

25. The proposed project will not adversely affect system stability or reliability. This finding is supported by findings 26 and 27, below.

26. The proposed project will not have an adverse impact on system stability or reliability. Instead, the project will improve system reliability and maintain system stability by replacing transmission line components nearing the ends of their useful service lives, and by reducing exposure to tree-caused outages. Ryder pf. at 21.

27. The G-33 line provides primary electricity supply and/or alternate electricity supply to several load-serving substations of CVPS in Vermont. NEP and CVPS have agreed to G-33 Line Emergency Switching Instructions, which detail the conditions under which CVPS will be authorized to operate G-33 switching equipment during emergencies involving power supply interruptions to CVPS substations. Ryder pf. at 4; exh. NEP-1.

**Economic Benefit to the State**

[30 V.S.A. § 248(b)(4)]

28. The proposed project will result in an economic benefit to the state and its residents. This finding is supported by findings 29 through 31, below.

29. The proposed project will provide economic benefit by improving reliability and reducing the risk of loss of supply to Green Mountain Power Corporation ("GMP") and CVPS customers in southeastern Vermont. Ryder pf. at 21.



30. The construction costs for the proposed project are estimated to be \$23,700,000. Exh. NEP-1.

31. In accordance with the G-33 Circuit Support Agreement between NEP and CVPS, dated October 1, 1996, CVPS directly supports the cost of 4.2 miles of the G-33 line that is used to supply CVPS load in the Brattleboro area. CVPS's annual G-33 support costs are estimated to increase from approximately \$84,000 per year to approximately \$535,000 per year. Exh. NEP-1.

**Aesthetics, Historic Sites, Air and Water Purity,  
the Natural Environment and Public Health and Safety**

[30 V.S.A. § 248(b)(5)]

32. The proposed project will not have an undue adverse effect on aesthetics, historic sites, air and water purity, the natural environment and public health and safety. This finding is supported by findings 33 through 110, below, which are the criteria specified in 10 V.S.A. §§ 1424(a)(d) and 6086(a)(1)-(8)(a) and (9)(k).

**Public Health and Safety**

[30 V.S.A. § 248(b)(5)]

33. The proposed project will not have any undue adverse impacts on public health or safety. The proposed project will comply with National Electrical Safety Code requirements. Ryder pf. at 25.

**Outstanding Resource Waters**

[10 V.S.A. § 1424(a)(d)]

34. There are no waters on or near the proposed project that have been designated as outstanding resource waters. Prasch pf. at 13; exh. DJP-2.

**Air Pollution**

[10 V.S.A. § 6086(a)(1)]

35. The proposed project will not result in undue air pollution. This finding is supported by findings 36 through 40, below.

36. During construction of the proposed project, there will be minimal air emissions from construction equipment and support vehicles. Prasch pf. at 5.

37. The proposed project will require little tree clearing, and when necessary, the trees and brush will be chipped, not burned. Prasch pf. at 5.

38. Dust control measures for the proposed project will be exercised when necessary and will consist of the application of water on unpaved construction access roads and other areas disturbed during construction. Prasch pf. at 5.

39. Any noise created by the construction activities will be short-term and will occur between the hours of 7 a.m. and 7 p.m., and will therefore have minimal impact on residential and commercial areas. Prasch pf. at 5.

40. The proposed new circuit breaker at the Ferry Road substation will employ sulfur hexafluoride ("SF6"). The circuit breaker will be continually monitored by a pressure alarm system with real-time links to the National Grid New England Control Center. If the temperature-compensated pressure were to drop to a pre-determined level, an alarm would be sent and a crew dispatched to investigate the cause of the alarm. NEP's maintenance standards call for bi-monthly inspections that include recording the SF6 pressure and comparing the pressure against prior readings. NEP has been a member of the Environmental Protection Agency's SF6 Emission Reduction Partnership for Electric Power Systems since December 2003. Exh. NEP-5 at 3.

**Water Pollution**

[10 V.S.A. § 6086(a)(1)]

41. The proposed project will not result in undue water pollution. This finding is supported by findings 42 through 49, below, and by the specific findings under the criteria of 10 V.S.A. §§ 6086(a)(1)(A) through (G), below.

42. The proposed project will not involve the discharge of waste or process water, and there are no existing or proposed point discharges of stormwater runoff from impervious surfaces associated with the G-33 transmission line in the project right-of-way or with the project right-of-way construction access routes. Prasch pf. at 5.

43. The stormwater discharges resulting from the proposed construction will trigger the need for coverage under VT General Permit 3-9020 (2006) (Construction General Permit for Stormwater Discharges Associated with Construction Activities) during the time period that project-related earth disturbance is occurring. ANR's Department of Environmental Conservation ("DEC") procedures determines the type of permit coverage by using a risk analysis methodology. Prasch pf. at 6.

44. A project-specific erosion prevention and sedimentation control plan ("EPSC Plan") was developed for the proposed project and submitted to DEC to support the application for a stormwater construction discharge permit. The EPSC Plan will specify the types and locations of erosion control measures or best management practices ("BMPs") that will be adopted during construction. The proper implementation and maintenance of construction phase BMPs will ensure that the proposed project construction activities are conducted in a manner that protects water quality, including wetlands, streams, and the Connecticut River. Prasch pf. at 6; exh. NEP-5.

45. The draft Individual Construction Stormwater Permit No. 6274-INDC proposed by the DEC references the EPSC Plan prepared for the proposed project. The draft construction stormwater permit requires the implementation, maintenance and monitoring of construction phase BMPs and authorizes construction phase stormwater discharges associated with the construction of the proposed project within Windham County into multiple receiving waters including Class II and Class III wetlands. Exh. NEP-5.

46. NEP will comply with the Construction Stormwater Permit during construction of the proposed project. Exh. NEP-5.

47. The proposed project will use existing access roads, paths and trails to the extent possible. The use of existing travel-ways will reduce the need for additional earth disturbance during proposed construction. Prasch pf. at 6.

48. A General Permit 3-9015 (Stormwater Discharges for New Development and Redevelopment To Waters That Are Not Principally Impaired By Collected Stormwater Runoff) is not required for the proposed project. The proposed project will utilize available existing unpaved access roads where paved roads do not exist. The proposed project will not create impervious surface which would trigger the requirement for coverage under this permit. Prasch pf. at 7.

49. The proposed project will not require a Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity, 3-9003, because no industrial activity is associated with the proposed project that would require coverage under the permit. Prasch pf. at 7.

#### Discussion

The consensus proposal for decision indicated that the Construction Stormwater Permit was issued by DEC on June 9, 2010. The conclusion that the proposed project will not result in undue water pollution is based upon NEP's compliance with the Construction Stormwater Permit and the site-specific EPSC Plan. Therefore, I am recommending that NEP's compliance with the Construction Stormwater Permit and EPSC Plan be required as a condition to the CPG. In addition, I recommend that NEP be required to file with the Board a copy of the Construction Stormwater Permit issued by DEC.

#### Headwaters

[10 V.S.A. § 6086(a)(1)(A)]

50. The proposed project is not located in a headwaters area. The proposed project is located in the lower Connecticut River Valley, extending between Bellows Falls and Brattleboro, which is not commonly considered a headwaters area. Prasch pf. at 14; exh. DJP-2 at 15-16.

#### Waste Disposal

[10 V.S.A. § 6086(a)(1)(B)]

51. The proposed project will meet applicable Department of Health and DEC regulations for the disposal of wastes, and will not involve the injection of waste materials or any harmful or

toxic substances into ground water or wells. This finding is supported by findings 52 through 58, below.

52. The waste that will be generated by the proposed project consists of used wood poles and support structures, used copper electric wires conductors, and miscellaneous equipment such as ceramic insulators, ferrous hardware, and fiberglass components. Ryder pf. at 21.

53. The used wood poles and structures from the proposed project that are salvageable will be re-used within NEP's operations. The non-salvageable poles will be transported to Canada for use as fuel at a cement plant in accordance with NEP protocols. Ryder pf. at 21.

54. The used conductors from the proposed project will be sold as scrap, and recycled for re-use. The miscellaneous equipment will be sold for scrap and recycled, or disposed of in accordance with applicable solid waste requirements. Ryder pf. at 21-22.

55. One component of the proposed project may take place within an area designated as an active hazardous site by ANR's Sites Management Section ("SMS"), the so-called Wyman Flint Site, located at 20-24 Mill Street, Rockingham, Vermont. Ryder pf. at 22.

56. The Wyman Flint Site is the subject of an August 2008, Corrective Action Plan ("CAP") submitted to the SMS on behalf of the Bellows Falls Historical Society. The Wyman Flint Site CAP summarizes the proposed construction activities to be performed and soil management protocols to be implemented at the Wyman Flint Site and required that a deed notice be recorded with the Rockingham Land Records documenting the presence of the soil contaminants and outlining appropriate soil management protocols for worker protection and on site soil reuse or off-site soil disposal. Ryder pf. at 22.

57. Because the geographic limits of the Wyman Flint Site were based on the areas to be redeveloped by the Bellows Falls Historical Society, it is possible that some of the pole structures for the proposed project may take place within the geographic limits of the Wyman Flint Site, and therefore would be subject to the CAP's soil management protocols and the requirements of the deed notice. Ryder pf. at 22-23.

58. NEP, in accordance with the CAP, for each pole structure located in the Wyman Flint Site, will spread the excess soil generated around the work area and allow it to remain on-site. NEP's proposed site activities and soil management protocols have been deemed by the SMS to

be sufficient and appropriate to address the contaminants that may be encountered at the Wyman Flynn Site. Post-construction, NEP will prepare and submit a summary report to SMS documenting the excavation and disturbance activities performed within the Wyman Flint Site geographical limits. Ryder pf. at 23-24.

### **Water Conservation**

[10 V.S.A. § 6086(a)(1)(C)]

59. The proposed project will have no water supply or wastewater connections. Water use will be limited to dust control measures for the unpaved construction access roads. Prasch pf. at 5 and 8.

### **Floodways**

[10 V.S.A. §§ 6086(a)(1)(D)]

60. The proposed project does not involve development within floodways or floodway fringes. Prasch pf. at 13; exh. DJP-2 at 15.

### **Streams**

[10 V.S.A. §§ 6086(a)(1)(E)]

61. The proposed project will result in no undue or adverse impacts on streams. This finding is supported by findings 62 through 64, below.

62. There are eleven named, perennial streams, along with smaller unnamed perennial, intermittent, and ephemeral drainages, identified in the proposed project area. Streams and drainages in the project right-of-way generally have intact scrub-shrub and herbaceous buffer areas. These buffers will be maintained to the greatest extent possible during proposed construction. Exh. DJP-2 at 24-25.

63. Any impact on ground and surface water, including streams and drainages, will be minimal during the proposed construction. All streams and drainages will be temporarily bridged to avoid impacts. Exh. DJP-2 at 16.

64. A project-specific EPSC Plan will maintain water quality standards to all surface waters during and following the proposed construction. Exh. DJP-2 at 16.

### **Shorelines**

[10 V.S.A. §§ 6086(a)(1)(F)]

65. The proposed project will have no undue or adverse impacts to shorelines. This finding is supported by findings 66 through 68, below.

66. The proposed project will retain the shoreline and waters in their natural condition, allow continued access to the waters and the recreational opportunities provided by the waters, and retain vegetation which will screen the project from the waters. Prasch pf. at 13; exh. DJP-2 at 16.

67. Public access to shorelines including those associated with the Connecticut River will be unaffected by the proposed project and current vegetative screening will be maintained outside of the existing right-of-way. Exh. DJP-2 at 17.

68. No existing structures in the right-of-way for the proposed project are currently located within shoreline areas, including the Connecticut River, and all of the streams and drainages are currently spanned. Any small streams located on the project right-of-way and any right-of-way access routes will be temporarily bridged to avoid impacts. By limiting work to the existing right-of-way, the bank integrity and water quality of shoreline areas will be maintained in their current condition. Exh. DJP-2 at 16-17.

### **Wetlands**

[10 V.S.A. § 6086(a)(1)(G)]

69. The proposed project will have no undue or adverse impacts to identified wetlands. This finding is supported by findings 70 through 75, below.

70. There are 13 Class II wetlands and 54 Class III wetlands identified in the proposed project area. Prasch pf. at 12; exh. DJP-2 at 8.

71. The proposed project qualifies as maintenance activities within the meaning of the Vermont Wetland Rules and, as such, is an allowed use that does not require a Conditional Use Determination ("CUD") for the activities in the project right-of-way. Prasch pf. at 8; exh. DJP-3.

72. The United States Army Corps of Engineers confirmed that the proposed project is a maintenance activity that does not require a permit under Section 404 of the Clean Water Act for fills to wetlands. Prasch pf. at 8; exh. DJP-4.

73. NEP will use the construction best practices outlined in Sections 5.0 and 10.0 of NEP's Environmental Guidance document to the extent that those sections relate to site preparation or construction activities within any wetland areas for the proposed project. Exhs. DJP-3 and ANR-1.

74. Any impacts to Class II wetlands outside the right-of-way for the proposed project will require a CUD. NEP has identified access routes that do not impact wetlands. Prasch pf. at 8.

75. NEP will comply with the Construction Stormwater Permit issued for the proposed project. The permit will authorize construction phase stormwater discharges associated with the proposed construction within Windham County into multiple receiving waters including Class II and Class III wetlands. Exh. NEP-5.

#### **Sufficiency of Water and Burden on Existing Water Supply**

[10 V.S.A. §§ 6086(a)(2)&(3)]

76. The proposed project will not result in additional water-supply or wastewater connections. Water use will be limited to dust control measures for the unpaved construction access roads. Prasch pf. at 5 and 9.

#### **Soil Erosion**

[10 V.S.A. § 6086(a)(4)]

77. The proposed project will not result in unreasonable soil erosion or a reduction in the capacity of the land to hold water so that a dangerous or unhealthy condition may result. This finding is supported by findings 78 through 81, below.



78. The Construction Stormwater Permit application for the proposed project required the evaluation of the nature of site conditions (soil erodibility, slopes, distance to receiving waters, etc.), project-related earth disturbance (area, duration), and measures to be used to prevent erosion and control sediment export off the site. Prasch pf. at 9.

79. The EPSC Plan for the proposed project specifies the types and locations of erosion control measures or BMPs that will be used during construction. The EPSC Plan will be followed during construction of the proposed project until final stabilization of soils is achieved, consistent with pre-project conditions. Prasch pf. at 9-10.

80. The Construction Stormwater Permit for the proposed project will require routine inspections of erosion control measures. The proposed project will include periodic inspections of the work in progress and the re-vegetated areas where the work is completed. Prasch pf. at 10-11.

81. An Environmental Compliance Monitor will monitor the proposed project's compliance with the EPSC Plan and ANR's Standards for Erosion Prevention and Sedimentation Control. The Monitor will be a qualified environmental professional who will be familiar with project environmental compliance requirements and will make regular site visits to ensure compliance. At a minimum, the Monitor will conduct weekly inspections of the construction activities. The Monitor will correct immediately any deficiencies in erosion controls or with permit compliance. Prasch pf. at 11.

### **Transportation Systems**

[10 V.S.A. § 6086(a)(5)]

82. The proposed project will not cause unreasonable congestion or unsafe conditions with respect to use of highways, waterways, railways, airports and airways, and other means of transportation existing or proposed. This finding is supported by findings 83 through 87, below.

83. The construction-related traffic for the proposed project will be dispersed over approximately one year of construction activity, and will not cause unusual congestion or unsafe transportation conditions in the affected towns. Ryder pf. at 24.

84. Equipment and materials for the proposed project will be transported with conventional truck transport. NEP will coordinate any work in highway right-of-ways anticipated to affect traffic flow with the Vermont Department of Transportation and with state and local safety and municipal officials. Ryder pf. at 24.

85. The following practices will be employed in order to mitigate potential transportation-related impacts: (1) close coordination with local and state law enforcement to identify locations where traffic volume would dictate use of public safety personnel or others for traffic control; (2) preparation and implementation of traffic-management plans at high-traffic-volume locations; (3) placement of appropriate signage and temporary guard structures or bucket trucks in the road shoulder at the edge of travel lanes to ensure that conductors are not allowed to sag to within unsafe clearances (as determined by the National Electrical Safety Code) above roadways during conductor-stringing operations; and (4) removal of all temporary signs, traffic control devices and equipment, with the exception of guard structures if used, during non-working hours. Ryder pf. at 25-26.

86. NEP will conduct detailed planning in advance of work at all public road crossings, particularly those with the potential for significant traffic disruption, to insure that inconvenience to the public is minimized during construction of the proposed project. Ryder pf. at 26.

87. Prior to performing any work within the State highway right-of-way, a Utility Access Permit under 19 V.S.A. § 1111 will be obtained for the proposed project from the Vermont Agency of Transportation. Ryder pf. at 26.

#### **Educational Services**

[10 V.S.A. § 6086(a)(6)]

88. The proposed project will not cause any unreasonable burden on the ability of any municipality to provide educational services. Because no additional permanent jobs will be created by or following the proposed project, no additional school children will be added to the local school systems. Ryder pf. at 26.

**Municipal Services**

[10 V.S.A. § 6086(a)(7)]

89. The proposed project will not cause any unreasonable burden on the municipalities to provide municipal or governmental services. To the extent the G-33 line provides direct or alternate electricity supply to the subject towns, the proposed project is expected to enhance the reliability of the services provided by the municipality. Ryder pf. at 27.

**Aesthetics, Historic Sites  
and Rare and Irreplaceable Natural Areas**

[10 V.S.A. § 6086(a)(8)]

90. The proposed project will not have an undue adverse effect on the scenic or natural beauty, aesthetics, historic sites or rare and irreplaceable natural areas. This finding is supported by findings 91 through 103, below.

91. The proposed project will involve the replacement of existing conductor and structures within an existing right-of-way which has existing vegetation that screens large portions of the project. The proposed project is a refurbishment of an existing line which has been an established part of the landscape for over 90 years. Busher pf. at 3-4; exh. MJB-2 at 9.

92. The proposed improvements will replace existing infrastructure with components of similar size and character. The proposed project will include 380 new pole structures, with 375 replacing existing structures, and the removal of five existing structures. The average increase in structure height will be 1.38 feet. Busher pf. at 3-4; exh. MJB-2 at 9.

93. The proposed conductor will utilize non-specular materials that will reduce visibility of the conductors. Busher pf. at 3-4; exh. MJB-2 at 9.

94. NEP plans to perform routine vegetative management along the corridor in coordination with the proposed project. Tree trimming, and in a few cases tree removal, will be necessary to restore the cleared width within the 100-foot right-of-way to 80 feet. Vegetation has encroached on the right-of-way in some cases because the line is currently offset from the center of the right-of-way and in other cases because of delayed vegetative maintenance. Busher pf. at 6; Ryder pf. at 5; exh. MJB-2 at 11.

95. The public will have views of the proposed upgrades from public viewing areas at several locations within the towns of Rockingham, Westminster, Putney, Dummerston, and Brattleboro. The clearing of the vegetative encroachment will not impact public views. The areas of the proposed project with the greatest visibility experience minimal visual change. Busher pf. at 3; exh. MJB-2 at 11-42.

96. The proposed project is consistent with the written community standards applicable to scenic resources of the Windham Regional Plan and the town plans of Rockingham, Westminster, Putney, Dummerston and Brattleboro. Ryder pf. at 9-18; Buscher pf. at 6.

97. NEP has taken generally available mitigating steps to improve the harmony of the proposed project with its surroundings. Mitigation will be taken throughout the proposed project through the design and placement of project components, the use of non-specular conductors, and the painting of poles in some locations to minimize the amount of attention brought to the structures. Exh. MJB-2 at 9, 16, 36.

98. In some locations, the proposed project upgrades will likely improve the visual appearance of the line at particular locations. For example, at the Bellows Falls Historical Society site, the existing H-frame structures will be converted to single-pole configurations, which will benefit visual aesthetics at the site. Busher pf. at 6; exh. MJB-2 at 12-14.

99. An archaeological reconnaissance survey for the proposed project was conducted in two phases. The Phase IA survey consisted of archival research and field surveys designed to collect information about and inventory previously recorded archaeological sites within the proposed project area, and environmental predictive modeling to identify additional areas of archaeological sensitivity. The Phase IB survey involved subsurface testing in archaeologically sensitive areas within the existing right-of-way where ground disturbance associated with pole relocations will occur. The purpose of the Phase IB survey was to locate and identify any potentially significant archaeological resources within project impact areas. Cherau pf. at 3-5; exhs. SGC-2, SGC-3, and NEP-5.

100. The Phase IB archaeological survey report was completed in March 2010, and submitted to the Vermont Division for Historic Preservation ("VDHP") on March 15, 2010. No significant archaeological sites were identified in the proposed project area and no further archaeological

investigations were recommended. In a letter dated May 25, 2010, the VDHP concurred with the survey findings and concluded that the proposed project will have no effect on any archaeological sites that are eligible for listing on the State Register of Historic Places. Exh. NEP-5.

101. Historic properties currently listed on the National Register that have views of the existing G-33 line will not be affected by the proposed project because those views were present at the time the properties were listed in the Register and will not be materially changed by the proposed project. Potential indirect effects to historic properties from the proposed project were found to be limited to places where existing poles will be replaced with poles of greater height. In places where pole heights will increase, views of the proposed project are already obstructed by intervening development, topography, or vegetation. Olausen pf. at 4; exh. SAO-2.

102. The methodology and findings of the historic architectural survey were presented to the VDHP on September 16, 2008. There was general agreement with VDHP that the proposed project will have little potential for any adverse effect on historic architectural properties. The Historic Architectural Reconnaissance Survey Report was submitted to the VDHP on October 27, 2008. Olausen pf. at 5.

103. One rare plant community, Pine-Oak-Heath Sandplain, was identified in Westminster adjacent to the right-of-way for the proposed project. The potential impact to the rare plant community will be minimal because no additional tree clearing beyond the right-of-way is required for the proposed project. Prasch pf. at 13; exh. DJP-2 at 20-21.

### **Necessary Wildlife Habitat and Endangered Species**

[10 V.S.A. § 6086(a)(8)(A)]

104. The proposed project will not have an undue, adverse impact on any necessary wildlife habitat and endangered species. This finding is supported by findings 105 through 109, below.

105. Impacts on white-tailed deer, moose, and black bear will be minimal because the proposed project is confined to the existing right-of-way and changes to any existing habitat will be minimal. The type of habitat preferred by moose and black bears was not found within the project area. Prasch pf. at 13; exh. DJP-2 at 22.

106. The Indiana Bat has not been identified or catalogued within the proposed project area by the Vermont Department of Fish and Wildlife. The habitat and specific landform requirements of this species (including limestone caves and open, abandoned mine shafts used for winter hibernation) were not identified within the proposed project area. Prash pf. at 13; exh. DJP-2 at 22-23.

107. NEP has identified all threatened and endangered species and rare species within the proposed project area. The threatened and endangered species are Muehlenberg's sedge (*Carex muchlenbergii*), Slender Mountain-rice (*Oryzopsis pungens*), Harsh Sunflower (*Helianthus strumosus*), Greene's Rush (*Juncus greenii*), Hairy Bush-clover (*Lespedeza hirta*), and Barbed-bristle bulrush (*Scirpus ancistrochaetus*). The rare plants, as specified in the Nongame and Natural Heritage Program Rare Plant List, dated August 7, 2009, are American hazelnut (*Corylus americana*), Schreber's Muhly (*Muehlenbergia schreberi*), Canada Frostweed (*Helianthemum canadense*), Perplexed tick-trefoil (*Desmodium perplexum*), Sprout Muhly (*Muehlenbergia sobolifera*), Whorled Mountain-mint (*Pycnanthemum verticillatum*), Trailing Bushclover (*Lespedeza procumbens*), and Few-flowered panic grass (*Dichanthelium oligosanthes*). Exh. NEP-1.

108. NEP, in response to ANR's request, has agreed to the following avoidance strategies for threatened and endangered species and rare species in the proposed project area as a condition to the CPG:

- a. NEP shall fence or otherwise protect all threatened and endangered species and rare species within the limits of disturbance of the proposed project or that occur close enough to the limits of disturbance that disturbance is a possibility, prior to construction and preconstruction clearing.
- b. In the event that a taking of any threatened and endangered species is inevitable during proposed construction, a Takings Permit with appropriate mitigation as approved by ANR shall first be obtained by NEP. If greater than 25 percent of a rare plant population is to be impacted by construction, the plants shall be transplanted and/or seeds collected for propagation adjacent to the disturbed area.
- c. NEP shall inspect the locations of all threatened, endangered, and rare species within the limits of disturbance and will install, maintain and deploy barrier fencing and signage during construction and annually for three seasons after the completion of the construction to determine plant distributions and make general observations for considerations related to future management efforts.

d. NEP shall, if necessary, conduct additional monitoring work that may include removal of competing or noncompatible vegetation to ensure that the plants are not subject to encroachment following construction activities. If during the monitoring activities it is determined that the identified threatened or endangered species are being limited in extent or distribution due to encroachment of invasive species, the invasives shall be removed if feasible following coordination with the Nongame and Natural Heritage Program.

e. As part of their best efforts to avoid introducing new populations of invasive species, NEP agrees to clean all equipment of seeds and adhering soil prior to moving it onto the site, and use only clean fill and straw that is free of non-native invasive plants and seeds.

Exh. NEP-1.

109. NEP will continue to consult with ANR outside the scope of this docket, concerning their vegetation management and use of pesticides within utility corridors with the goal of continuing its development of uniform "best practices" methodology. Exh. NEP-1.

#### Discussion

As part of settlement discussions, NEP has agreed to comply with avoidance strategies for threatened and endangered species and rare species in the proposed project area as described in Finding 110 above. The conclusion that the proposed project will not have an undue, adverse impact on any threatened and endangered species is supported by NEP's compliance with the avoidance strategies. Therefore, I am recommending that NEP's compliance with the avoidance strategies for threatened and endangered species and rare species be required as a condition to the CPG.

#### **Development Affecting Public Investments**

[10 V.S.A. § 6086(a)(9)(K)]

110. The proposed project will not unnecessarily or unreasonably endanger the public or quasi-public investment in any public facilities, services or lands, or materially jeopardize or interfere with the function, efficiency, or safety of the public's use or enjoyment of or access to any such facility, service or lands. Other than possible temporary traffic-related impacts during construction, the proposed project will not adversely impact other public facilities located near the proposed project. Ryder pf. at 27.

**Least-Cost Integrated Resource Plan**

[30 V.S.A. § 248(b)(6)]

111. NEP maintains a relationship with TransCanada Hydro Northeast ("TransCanada") and Island Corporation ("Island") wherein TransCanada and NEP deliver power to Island in exchange for the lease of certain mill powers. Exh. NEP-5 at 2.

112. The proposed project is consistent with the principles of least-cost planning. The proposed project meets the public's need for energy services by maintaining system reliability at the lowest cost. The proposed project is driven by the need to replace aging components on an existing facility, rather than by load growth in a specific geographic area; therefore a demand-side management program or new generation cannot readily address the need for the proposed project. Exh. NEP-5 at 2.

**Discussion**

NEP does not currently have a Board-approved Integrated Resource Plan ("IRP"). Even if NEP requires an IRP, pursuant to Section 218c, due to its relationship with TransCanada and Island, the lack of an IRP does not preclude the issuance of a CPG as long as the proposed project is consistent with the principles for resource selection pursuant to Section 248(b)(6). *Petitions of Vermont Electric Power Company, Inc. and Green Mountain Power Corporation*, Docket 6860, Order of 1/28/05 at 61. Because the proposed project is consistent with those principles, I conclude that it satisfies Section 248(b)(6).

**Compliance with Electric Energy Plan**

[30 V.S.A. § 248(b)(7)]

113. The proposed project complies with the *Vermont Electric Plan* (the "Plan"). The Plan highlights the need for a reliable transmission system and notes the interconnectedness of the region's transmission lines. The Electric Plan also notes that modern society "depend[s] on reliable electricity as an essential resource for national security, health and welfare, communications, finance, transportation, food and water supply, heating, cooling, lighting; computers and electronics; commercial enterprise; and even entertainment and leisure." Ryder pf. at 28-29.



114. The Department filed a determination on July 23, 2010, that the proposed project is consistent with the *Vermont Electric Plan*, in accordance with 30 V.S.A. § 202(f).

**Outstanding Resource Waters**

**[30 V.S.A. § 248(b)(8)]**

115. There are no waters on or near the proposed project that have been designated as outstanding resource waters. Prasch pf. at 13; exh. DJP-2.

**Waste to Energy Facilities**

**[30 V.S.A. § 248(b)(9)]**

116. This criterion is not applicable because the proposed project is not a waste-to-energy facility. Ryder pf. at 29.

**Existing or Planned Transmission Facilities**

**[30 V.S.A. § 248(b)(10)]**

117. The proposed project will be served economically by existing or planned transmission facilities without undue adverse impact on Vermont utilities or customers. This finding is supported by findings 118 through 122, below.

118. The refurbished transmission line will continue to be a part of transmission facilities that already exist in the area without any undue adverse effect on Vermont utilities or customers. Ryder pf. at 29.

119. The Project is expected to result in improved reliability, which will be a positive effect for Vermont utilities and customers. Ryder pf. at 29.

120. The proposed project was designed to comply with National Electrical Safety Code clearance requirements between the G-33 line and any under-crossing distribution lines. There are multiple occurrences where the G-33 line crosses existing distribution lines owned by CVPS and GMP. Some of these distribution crossings currently have unusual constructions in which the distribution line has been lowered and then raised at the G-33 line crossing to meet clearances required by the National Electrical Safety Code. Exhs. NEP-5 and SHR-5.

121. NEP did not attempt to design the crossings to accommodate potential future distribution-line height increases because no distribution utility raised the issue and because it would be difficult for NEP to estimate the needed height for the distribution lines. Exh. NEP-5; tr. 6/10/10 at 10-13 (Ryder).

122. If a distribution utility did need to raise its lines at the crossing point, NEP would modify the G-33 line at that point, which would likely involve installing two new poles on the G-33 line. The distribution utility would likely bear the cost. Tr. 6/10/10 at 12-13 (Ryder).

### Discussion

The consensus proposal for decision indicated that NEP has communicated with CVPS and GMP regarding under-crossing distribution lines along the G-33 line, and agreed to work with each utility to identify those crossing locations where distribution line upgrades could reasonably be anticipated before the construction of the proposed project.<sup>3</sup> The consensus proposal for decision also indicated that the pole height increases on the G-33 line could be implemented during the proposed construction at a reasonable cost to accommodate the future distribution line improvements. Given NEP's agreement to work with CVPS and GMP and the potential to improve proposed project aesthetics, I am recommending the Board require NEP, prior to construction of the proposed project, to submit to the Board a copy of the agreement with CVPS and GMP to address distribution line crossings.

### **III. DISCUSSION**

NEP has provided sufficient evidence to demonstrate that the proposed project complies with Section 248 criteria. I recommend that the Board issue a CPG with conditions authorizing construction of the proposed project.

On July 1, 2010, NEP, the Department, ANR, and CVPS filed a consensus proposal for decision and all the parties agreed that the Board should issue a CPG. Parties waived their rights under 3 V.S.A. § 811 to review and comment upon a proposal for decision provided that the Board issues an order consistent in all material aspects with the consensus proposal for decision. Although I am recommending that the Board require conditions for a CPG that were not

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3. See Exhibit Joint-1 at 40.

proposed in the consensus proposal for decision, the conditions I am recommending are consistent in material aspects to findings in the consensus proposal for decision. Therefore, as this proposal for decision is not adverse to any party, it has not been circulated among the parties, pursuant to 3 V.S.A. § 811.

#### **IV. CONCLUSION**

Based upon the evidence in the record, I conclude that the proposed project, with the conditions identified below:

- (a) will not unduly interfere with the orderly development of the region with due consideration having been given to the recommendations of the municipal and regional planning commissions, and the recommendations of the municipal legislative bodies;
- (b) is required to meet the need for present and future demand for service which could not otherwise be provided in a more cost-effective manner through energy conservation programs and measures and energy efficiency and land management measures;
- (c) will not adversely affect system stability and reliability;
- (d) will result in an economic benefit to the state and its residents;
- (e) will not have an undue adverse effect on aesthetics, historic sites, air and water purity, the natural environment and the public health and safety, with due consideration having been given to the criteria specified in 10 V.S.A. § 1424a(d) and §§ 6086(a)(1) through (8) and (9)(K);
- (f) is consistent with the principles of least-cost integrated resource planning;
- (g) is in compliance with the electric energy plan approved by the DPS under § 202 of Title 30 V.S.A.;
- (h) does not involve a facility affecting or located on any segment of the waters of the State that has been designated as outstanding resource waters by the Water Resources Board;
- (i) does not involve a waste-to-energy facility; and
- (j) can be served economically by existing or planned transmission facilities without undue adverse effect on Vermont utilities or customers.

I recommend that the Board approve the proposed project and issue a CPG for construction of the proposed project with the conditions set forth in the proposed Order and CPG, below.

Dated at Montpelier, Vermont, this 28<sup>th</sup> day of July, 2010.

s/ Mary Jo Krolewski  
Mary Jo Krolewski  
Hearing Officer

**V. ORDER**

IT IS HEREBY ORDERED, ADJUDGED AND DECREED by the Public Service Board of the State of Vermont that:

1. The findings, conclusions, and recommendations of the Hearing Officer are adopted.
2. The proposed reconstruction of 20.3 miles of G-33 transmission line in the towns of Rockingham, Westminster, Putney, Dummerston and Brattleboro, Vermont, by New England Power Company, d/b/a National Grid ("NEP"), will promote the general good of the State of Vermont in accordance with 30 V.S.A. Section 248, and a certificate of public good to that effect shall be issued.
3. Construction, operation, and maintenance of the proposed project shall be in accordance with the plans and evidence as submitted in these proceedings. Any material deviation from these plans must be approved by the Board.
4. NEP shall file with the Board, prior to the start of construction, a copy of the Construction Stormwater Permit issued by the Department of Environmental Conservation.
5. All construction activities shall comply with the Construction Stormwater Permit issued by the Department of Environmental Conservation.
6. All construction activities shall comply with the site-specific Erosion Prevention and Sediment Control Plan developed for the proposed project.
7. NEP shall use the construction best practices outlined in Sections 5.0 and 10.0 of NEP's Environmental Guidance document to the extent that those sections relate to site preparation or construction activities within any wetland areas for the proposed project.
8. NEP shall comply with the avoidance strategies for threatened and endangered species and rare species in the proposed project area agreed upon with the Agency of Natural Resources.
9. NEP shall file with the Board, prior to construction of the proposed project, a copy of the agreement to address distribution line crossings between NEP, Central Vermont Public Service Corporation, and Green Mountain Power Corporation.
10. Prior to proceeding with construction, NEP shall obtain all necessary permits and approvals. Construction, operation, and maintenance of the proposed project shall be in

accordance with such permits and approvals, and with all other applicable regulations, including those of the Agency of Natural Resources.

Dated at Montpelier, Vermont, this 3<sup>rd</sup> day of August, 2010.

<u>s/ James Volz</u>	)	
	)	PUBLIC SERVICE
	)	
<u>s/ David C. Coen</u>	)	BOARD
	)	
	)	OF VERMONT
<u>s/ John D. Burke</u>	)	

OFFICE OF THE CLERK

FILED: August 3, 2010

ATTEST: s/ Susan M. Hudson  
Clerk of the Board

*Notice to Readers: This decision is subject to revision of technical errors. Readers are requested to notify the Clerk of the Board (by e-mail, telephone, or in writing) of any apparent errors, in order that any necessary corrections may be made. (E-mail address: psb.clerk@state.vt.us)*

*Appeal of this decision to the Supreme Court of Vermont must be filed with the Clerk of the Board within thirty days. Appeal will not stay the effect of this Order, absent further Order by this Board or appropriate action by the Supreme Court of Vermont. Motions for reconsideration or stay, if any, must be filed with the Clerk of the Board within ten days of the date of this decision and order.*